

SECTION 10

ORDNANCE AND EXPLOSIVES (OE)

10-1. **Background.**

a. In conjunction with its other missions, the USACE is responsible for managing environmental restoration projects in the specialized field of OE at Formerly Used Defense Sites (FUDS) and for providing OE services to other customers (e.g., BRAC, IR, etc.) as requested.

b. The U.S. Army Engineering and Support Center, Huntsville (CEHNC) is designated, in ER 1110-1-8158, as the USACE OE Mandatory Center of Expertise (MCX) for OE and is also an OE Design Center. Current MCX guidance documents can be found on the OE Homepage: <http://www.hnd.usace.army.mil/>

c. Typically, the OE Design Center designs the OE project and then conducts the OE Removal through existing contracts. The district is the Project Manager (PM) during removal actions and coordinates all project activities with engineering, safety and contract expertise provided by the OE Design Center through project completion.

d. Districts may execute final removal actions when approved by the MSC Commander after receiving written concurrence from the OE MCX. This process is described in ER 1110-1-8153 and the FUDS Program Manual (for FUDS projects).

10-2. **General.**

a. The OE Response process is defined in ER 1110-1-8153, EP 1110-1-18 (Chapter 5), and the FUDS Program Manual (for FUDS projects).

b. For projects under the management of an active or transferring installation, the installation may want to retain some degree of management control. In such cases, the PM will hire the appropriate OE Design Center to provide USACE assistance in a manner that is transparent to the customer, but the PM will remain the interface with the installation.

c. Districts preparing to work on a project (FUDS, BRAC, IR, SFO, etc.) with known or suspected OE (including Civil Works) will coordinate the project with the OE Design Center and the OE MCX as defined in ER 1110-1-8153. Once notified, safety issues will be addressed and a determination will be made concerning the appropriate actions to be taken.

d. OE concerns will be addressed before initiating any work on a project. The type of OE action required (i.e., OE removal, anomaly avoidance, OE support during construction, etc.) will be determined on a case-by-case basis. The district is responsible for preparing the scope of work and work plans for ordnance/anomaly avoidance and OE support during construction. These documents require OE MCX review. The OE MCX will provide written concurrence or non-concurrence.

10-3. Definitions.

a. Ordnance and Explosives (OE). OE consists of either (1) ammunition, ammunition components, chemical or biological warfare material or explosives that have been abandoned, expelled from demolition pits or burning pads, lost, discarded, buried, or fired. Such ammunition, ammunition components, and explosives are no longer under accountable record control of any DOD organization or activity, or (2) explosive soil (see below).

b. Explosive Soil. Explosive soil refers to mixtures of explosives in soil, sand, clay, or other solid media at concentrations such that the mixture itself is explosive. Typically, this means in concentrations of 10% or more by weight. This is not defined for all types of explosives. See ER 1110-1-8153 for a complete definition and contact the OE MCX for current guidance on this issue.

c. Ordnance/Anomaly Avoidance. This refers to techniques employed by Explosive Ordnance (EOD) or Unexploded Ordnance (UXO) personnel at sites with known or suspected OE to avoid any potential surface UXO and any subsurface anomalies. This usually occurs at mixed hazard sites when HTRW investigations must occur prior to execution of an OE removal action. Intrusive anomaly investigation **is not authorized** during ordnance avoidance operations.

d. OE Support During Construction. This is support provided by qualified UXO personnel during construction activities at potential OE sites to ensure the safety of construction personnel. Coordination with the OE MCX to determine the type of support is required. See ER 1110-1-8153 for complete definition.

e. Unexploded Ordnance (UXO). UXO refers to military munitions that have been primed, fuzed, armed, or otherwise prepared for action, and have been fired, dropped, launched, projected or placed in such a manner as to constitute a hazard to operations, installations, personnel, or material and remain unexploded either by malfunction, design, or any other cause.

f. Chemical Warfare Materiel (CWM). This refers to items configured as a munition containing a chemical substance that is intended to kill, seriously injure, or incapacitate a person through its physiological effects. It also includes V- and G- series nerve agent, H- series blister

agent and lewisite in other-than-munition configurations. Due to their hazards, prevalence, and military-unique application, chemical agent identification sets (CAIS) are also considered CWM. CWM does not include: riot control agents, chemical herbicides, smoke and flame producing agents, or soil, water, debris or other media contaminated with chemical agent.

g. Removal Action (RA). A RA is the actual cleanup or removal of OE from the environment to include the disposal of removed material. The term includes, in addition, without being limited to, security fencing or other measures to prevent, minimize, or mitigate damage to the public health or welfare or to the environment.

10-4. Unplanned Discovery of OE. The OE Design Center typically performs removals when OE is known, or suspected to be present, during the planning stage. In cases when OE, or suspected OE, is unexpectedly discovered during construction or everyday operations at any USACE project site, the following steps will be taken:

- Cease all operations;
- Contact the local EOD unit (for BRAC, IR etc.) or local law enforcement officials for FUDS projects) who will respond and dispose of the item(s); and
- Notify the OE MCX to determine the conditions under which work may be resumed.

10-5. OE Safety.

a. Explosive safety requirements are contained in DOD 6055.9-STD, AR 385-64, and AR 385-61. Projects involving OE will not begin field work until the appropriate plans and explosive safety submissions are reviewed and approved by the proper authority.

b. OE Safety and Occupational Health requirements are found in ER 385-1-92. These requirements will be covered in (ER 385-1-95) which will be published in the near future.

c. OE activities will be conducted by qualified UXO contractor personnel or USACE OE Safety Specialists. Qualifications and work standards for conducting UXO work may be obtained from the OE MCX. Some work practices are peculiar to UXO work such as number of hours that may be worked while conducting UXO activities. Currently there is a limit of 40 hours per week with two consecutive days' rest between work weeks.

d. The OE MCX may conduct spot checks of field operations at project sites where OE is a concern.

e. Specific training requirements for OE project personnel are contained in Section 5 of this pamphlet.

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- f. Personnel without appropriate training, and non-essential personnel, will not be allowed into an exclusion zone during UXO operations.
- g. Points of contact for OE concerns and questions are located on the OE homepage.